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THE NORTH DAKOTA FARMER



"THE NORTH DAKOTA FARMER FOR NORTH DAKOTA FARMERS"

Vol. 16, No.7 | Lisbon, North Dakota, January 15, 1915 | 50 Cents A Year

A Group of Prize Winners at the Boys' and Girls' Institute Held at the Agricultural College, Dec. 15-18



PEMBINA COUNTY

Helga Raumin, Theresa Roholt,
Katie Norgart, Mildred Armstrong, Amy Simunds,
Supt. Charlotte A. Jones
Lewis Thompson,

WALSH COUNTY

Supt. E. W. Erickson,
Blanche Herwick, Blanche Costello, Tilda Tenneson,
Lilly Johnson,
Doris Dubuque, Mary Cunningham, Margaret McDonald

GRAND FORKS COUNTY

Eugene Daily,
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OF POWER FARMING
SEE for yourself the many uses
DETROIT FARM ENGINES
can be put to

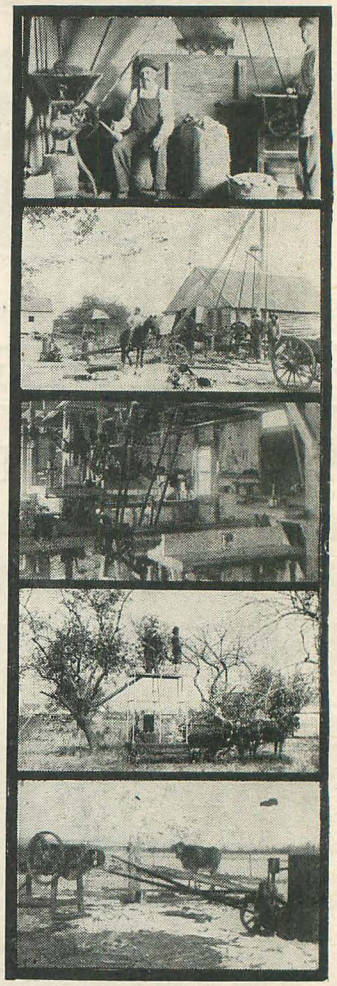
USE CHEAP, EFFICIENT DETROIT FARM ENGINE

All the drudgery has been taken out of farming—all the back-breaking effort is a thing of the past. And now—with considerably less effort—the farmer can more than double his profits, and find time for recreation with his family and friends.

The man who is engaged in farming for profit no longer questions the fact that he needs a reliable farm engine for a score of different uses every day in the year.

But the early farm engines were great, massive, cumbersome things, weighing nearly one thousand pounds per horse power. They were complicated and costly. Even when they were finally installed on the farm it required the services of mechanics to keep them in order and—as a consequence—only the well-to-do farmer could consider such equipment. Those days, however, have gone once and for all.

In place of the clumsy, heavy engine (which needed two or more horses to drag it around) we have the compact, ever reliable



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It is no longer necessary for the farmer to be an expert engineer because this engine has no intricate collection of valves, cams, gears, sprockets or cranking devices. **There is absolutely nothing about the Detroit which can get out of order,** and a half grown boy can run it as well as anybody else.

THE COST OF PRODUCTION

An engine which is designed to use only gasoline cannot be run satisfactorily on any other fuel. Three gallons of kerosene can be produced in the same time that it requires to make one gallon of gasoline. So it stands to reason that gasoline may at any time advance in price while kerosene will cost less and less every year. So why buy an engine which uses only gasoline when you can have a Detroit Farm Engine which is designed for, and runs successfully on kerosene. Also remember, the Detroit is not a gasoline engine with "kerosene fittings," but an engine built to run on kerosene, alcohol, distillate, or gasoline—just as you prefer. Furthermore, it uses but one pint of fuel per horse power hour.

The saving in fuel cost in a month's operation of the Detroit, will pay your lubrication bill for a year.

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This engine will grind your feed, saw your wood, make perfect electric light, churn butter, separate milk, pump water, mix concrete, operate hoists, truck feed, shell husks and shell corn, run your grind stone, lathe or drill press, run washing machines, shearing machines, threshing machines, and practically any type of machinery around the farm. It will also elevate grain into silos.

No matter what your need may be you will find just the correct engine in the Detroit line to do the work easily and satisfactorily. There are six sizes of Detroit Farm Engines—2½ horse power, 4 horse power, 6 horse power, 8 horse power, 12 horse power double cylinder and 18 horse power double cylinder.

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We sell all Detroit Farm Enginees with the distinct understanding that the purchaser may try them for thirty days on his own work—in his own way. If, at the end of that time, he is not satisfied with the engine we will refund every penny paid to us without question or argument. Surely there can be no fairer way to back up our claims. Every Detroit Engine is sold with a binding **ten year guarantee.** A guarantee bond in the sum of $50,000 is given by us to every purchaser to protect him against any possible failure on our part to keep every agreement we make.

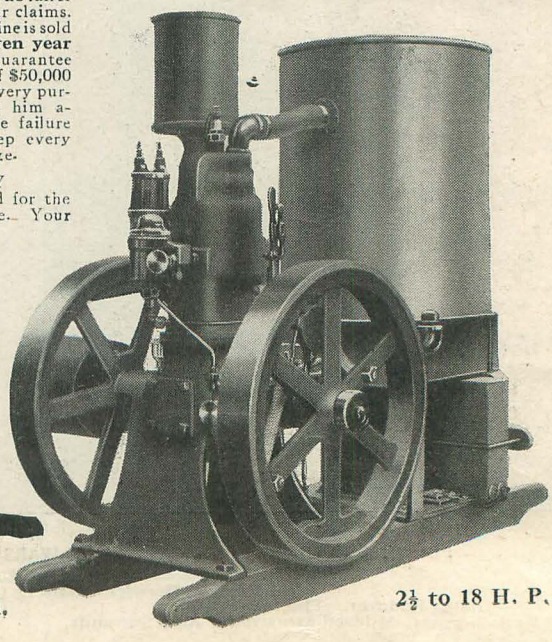
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It is not necessary to take our word for the performance of the Detroit Farm Engine. Your neighbors and fellow farmers will tell you what it is doing—what it has done—and what it can do. Ask us for our book of satisfied customers and recent testimonials.

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THE NORTH DAKOTA FARMER

Vol. 16, No. 7 LISBON N. D., JANUARY 15, 1915 50 Cents a Year

Modern Conveniences in the Farm Home

By J. H. Worst, President N. D. A. C.

Very few families would think of living in a town of any size without having the home provided with modern equipment, such as electric lights, sewerage, running water, and the various other conveniences that are associated with them. Of course, it costs considerable money to enjoy these modern conveniences, but no well-to-do family living in the city would dispense with them on that account. In fact families living in town quite generally demand modern improvements and are willing to pay the increased rental price, in order to secure them.

In the country, on the other hand, where all modern household equipment is just as available for the farm home as for the city home, only in a somewhat different form nevertheless their installation in the country home is a rare exception to the general rule. Even in the homes of wealthy families, labor-saving appliances are seldom found, nor in fact are any particular improvements observable in most farm homes beyond what, in many respects, our grandfather farmers had to put up with.

Just why the dwellers in the city, regardless of social standing or earning capacity, shall demand modern conveniences, while dwellers in the open country look upon such equipment as impossible luxuries, is difficult to understand, except upon the general theory of custom. Perhaps it is partly because farmers have so long looked upon themselves and their families as being somewhat socially inferior to professional and business people. That they are considered socially inferior by most professional and business people goes without saying, but when farmers themselves act as tho they consider themselves socially inferior to any class on earth, they do their kind of people a great injustice. But the very fact that farmers refuse to look upon modern improvements for the country home as being absolutely necessary just as soon as their financial circumstances will warrant it, is the strongest kind of evidence that they do not consider comfortable living as being one of the most essential things in life.

The sooner, therefore, that farmers recognize the importance of supplying their families with modern conveniences and labor-saving devices, such as electric lights, running water in the home by use of pressure tank, and sewage disposal by the installation of septic tank, etc., the sooner will the farm be considered a desirable place to live and work and even to enjoy a career. But until it is so considered, the farm will not attract progressive young men and women.

Hard, bone-breaking toil and long hours are not necessarily essential to successful farming. Drudgery is what men foolishly make of necessary labor, not only for themselves, but too often they force toil in that form upon their wives. It may be avoided, however, by the exercise of good judgment in the selection of modern equipment for saving human brawn and muscle, which at the same time can be made to increase the profits of the farm as well as make life on the farm healthful and satisfying.



"Winners at the Grand A. C." at the Fifth Annual Boys' and Girls' Institute, December, 1914

An ordinary 14-foot windmill and storage battery will supply a country farmstead with all the power and light required for ordinary purposes. An apparatus recently invented supplies a farm home with electric energy for lighting and power by the use of a small gasoline engine. The apparatus is so constructed that it works automatically, starting of its own accord when the storage battery is reduced to about half strength and stopping again when fully charged. All the

attention this apparatus requires is to be supplied from time to time with gasoline. The cost of the apparatus here referred to is about $700, which is within reach of many farmers.

Another hundred dollar outlay will supply a pressure tank and a septic tank, the former to supply running water for the kitchen and bathroom, while the latter takes the place of the sewer so essential in every city. Either a hot water or hot air heating plant can be installed in the country almost if not quite as cheap as in the city.

With these modern conveniences installed in the country home, much of the household drudgery will be eliminated, better sanitary conditions will be insured, and the health of the household conserved on account of the uniform temperature that will prevail in all parts of the dwelling, as well as the use of the bath and the indoor closet.

When one considers that the aforementioned household equipment can be enjoyed for considerable less than $1000, he is made to wonder why it should not be the ambition of every farmer to install such modern improvements just as soon as he is out of debt and can command some surplus money for better living. The fact that farmers have always dispensed with luxuries is no argument against the installation of labor-saving equipment in their homes.

Once the **habit** is established—once it becomes the **custom** to install modern mechanical devices in the rural homes in order, just as soon as financial conditions will permit, to save the wife and daughters from needless drudgery, then the biggest problem connected with contentment on the farm will be solved. Every farmer should look forward, therefore, to the installation of such modern equipment as has been described, at the earliest date consistent with his financial condition. Instead of purchasing more land, first make the home a comfortable, delightful place to live. The wife's health and strength should weigh more heavily on a farmer's mind than additional acres or larger herds and flocks. In fact custom should become fixed beyond question so that a girl marrying a young farmer may have the assurance of a home with all modern conveniences just as soon as her share of the property, made thru their joint efforts, will justify it. Under any circumstances the improved equipment in the house should equal the improved machinery, purchased for the farm.

This should become a custom with all the binding force of law—a tradition as it were—so that the man who deprives his wife of modern household equipment while employing labor-saving machinery on the farm and in the barn, will be looked upon as negligent of the most sacred duty that a man ever assumed.

Under ordinary circumstances the husband and wife need not grow very old before both the dwelling and the farm may be supplied with modern drudgery-eliminating, labor-saving equipment, and the work, both indoors and out, transferred into a highly intellectual and interesting occupation instead of a soulless grind.

Money is extremely fascinating, but health and inspiring ideals are more important, and the wife and mother of the children should be able to carry her youth and buoyant spirit far out into her life. She should not become a broken-down physical wreck before half her years are lived, and all for for the sake of more acres.

A young progressive state like North Dakota should set the pace for the rest of the world by becoming celebrated for its attractive country homes, presided over by veritable rural queens, and every home a model of convenience, comfort and good cheer.

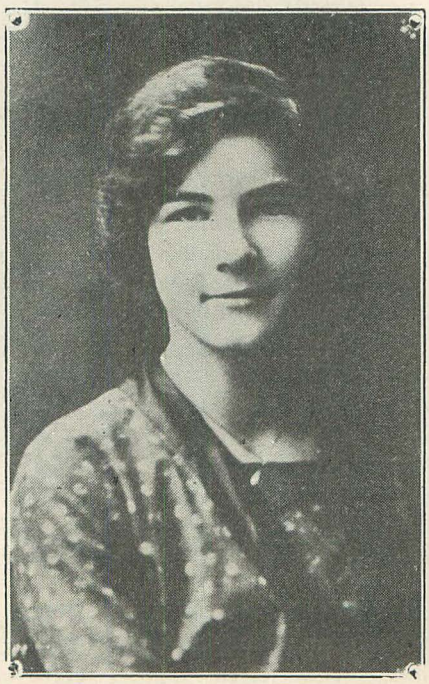
This is not a windy state yet the air currents that sweep over our prairies are a tremendous asset and can be made to render an annual service in value beyond computation. These currents of air represent a form of energy, when utilized, as they will be, that will make that of horses and engines insignificant by comparison, for ere long the winds will become the farmer's unfailing, tireless, obedient servant.

Pork Production Contest

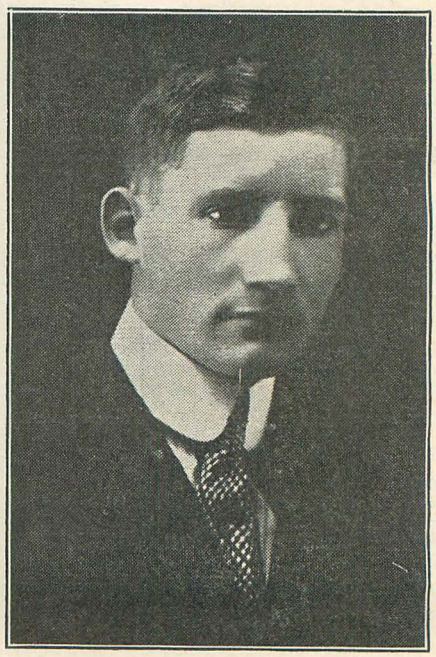
Better Farming Section, N. D. A. C.

In the North Dakota Pork Production Contest just closed the twenty-four boys and girls that won the prizes produced hogs that averaged 210 pounds in seven months. This was done too by using the feeds produced on the farms. After charging up the food consumed at market prices, it was found that the average cost of producing a pound of pork was 2¾ cts. a pound. The hogs were sold for more than twice that much per pound; in fact some of them for nearly two and a half times as much, which means that the hogs furnished a market for the food right on the farm and paid more than twice the regular market price for it.

The object of the contest wa to demonstrate that a marketable hog can be produced in about seven months, or before cold weather, and that North Dakota feeds are eminently adapted for doing this thing at a profit. Another reason for wanting rapid gains in pork production is that



Miss Anna Barrett, Larimore



Paul Kellogg, Monango

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the pig makes better use of the food the younger it is, which means that more pounds of pork are secured from feeding a given amount of food to a young pig than to an old one.

The winner in the contest, Miss Anna Barrett of Larimore, produced 3811 pounds of pork from a litter of good returns for caring for a litter of pigs. These pigs were farrowed April 27th. From the 9th of May until the 10th of October they had the run of a blue grass pasture. In addition, they were fed 21 bushels of corn, 14 of barley, 20 of oats, 2½ tons of screenings, 1½ pounds of bran and shorts,

	Name	Post Office	Breed	Prize	No. Pigs	Age Days	Gross Wgt.	Profit per day over Feed cost
1	Anna Barrett	Larimore	Duroc Jersey	$100	14	209	3811	65½cts.
2	Paul Kellogg*	Monango	Yorkshire	50	14	222	3607	63½cts.
3	Edith M. Penno†	Grafton	Yorkshire	30	10	190	2403	47½cts.
4	Ida Edwardsen	Norma	O. I. C.	25	10	248	2597	38cts.
5	Maurice Helgerud	Harvey	Chester W.	15	10	204	1940	35½cts.
6	Elba Arduser	Marion	Poland China	10	10	214	2262	34½cts.
7	Harry Youngdahl	Fairmount	Poland China	10	8	217	1931	34cts.
8	Milton Pierce	Ellendale	Duroc Jersey	10	8	199	1746	33¼cts.
9	Ray Dunlap	Michigan	Poland China	10	10	216	1892	30¼cts.
10	Benedict Walsh	Harvey	Duroc Jersey	10	9	191	1460	28¼cts.
11	Marie Beisser	Bailey	Chester W.	5	10	228	1657	28cts.
12	John L. Haley	Esmond	Chester W.	5	12	217	2643	26½cts.
13	Patrick Fisher	Bantry	Berkshire	5	12	255	2793	26cts.
14	Rex Barnes	Upham	Chester W.	5	9	213	2090	25⅝cts.
15	Glenn Emch	Leith	Gr. Chester W.	5	9	215	1530	25⅓cts.
16	Donald Amsbaugh	Howard	Gr. Yorkshire	5	10	211	1553	25¼cts.
17	Walter Dahlstrom	Pettibone	Poland China	5	7	245	1865	24⅓cts.
18	Lyle Curtis	McClusky	Chester W.	5	10	216	2291	23⅝cts.
19	Matthew J. Laber	Sykeston		5	11	211	1725	23¼cts.
20	Earle Hammer	LaMoure	Poland China	5	7	214	1225	23cts.
21	Lena Beisser	Bailey	Chester W.	5	9	225	1414	22½cts.
22	Gilbert Johnson	Medina	Duroc Jersey	5	11	210	1691½	22cts.
23	Daniel Kromry	Kramer	Gr. Poland Ch	5	10	214	2130	21¼cts.
24	Thelma Young	Brazil	Gr. Poland Ch.	5	11	239	2587	21cts.

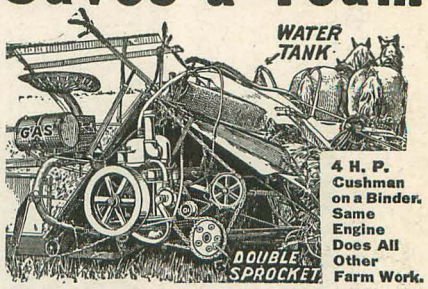
* Prize of Yorkshire sow awarded by Thos. Canfield, Lake Park, Minn.
† Prize of Yorkshire boar awarded by L. A. Knoke, Willow City, N. D.

14 Durocs in 209 days. She sold them for 6½ cts. which brought her $247.71, while the value of the feed was $91.49, which left a return of $156.22 above the cost of the feed. The average daily return above the cost of the feed was 75 cents—pretty

1400 pounds of milk, and from the 1st of November until the closing of the contest they followed cattle that were on feed. From this amount of feed, the 14 pigs with an average weight of 272 pounds were produced and the cost per pound was 2⅖ cents.

Paul Kellogg, who stood second in the contest, had a total production of 3607 pounds from a litter of 14 Yorkshires in 222 days. His feed cost was $75.15, and at 6½ cts. the hogs were worth $235.45, leaving a return of $160.30, which figures out that the returns were 72 cents per day above the feed cost. The average weight of the pigs was 257½ at the close of the contest. These pigs were

Saves a Team



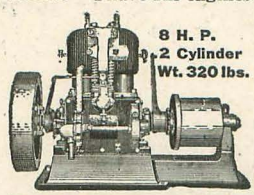
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Iver A. Madson, Wheatland, N. D., writes: "I have six engines and the **Cushman is the best.** It does not jump like a heavy engine. On the binder it is a great saver of horse flesh. It will do all you claim and more too." Ask for free engine book.



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The Largest Foundry Machine Shop and Boiler Shop in the Northwest. A large stock of Structural Steel and Iron always on hand. Full Line of Blacksmith Tools for Farm use. The Biggest plant in the Biggest Little City in the world.

We make a specialty of modern Fire Escapes. Best Tools and Skilled Workmen is the secret of our success. While in our city call and see us and judge for Yourselves.

Oxy-Acetylene Welding in connection.

End of North Bridge, N. P. Ave.

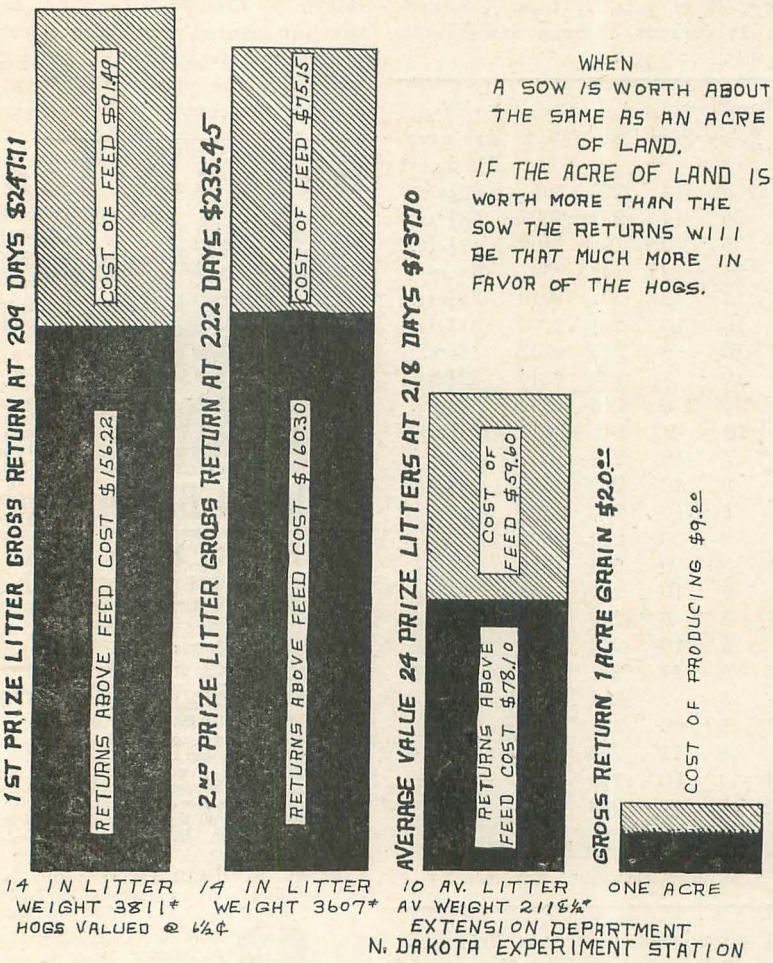
fed 3 bushels of corn, 24 bushels of barley, a bushel of oats, 1704 pounds of shorts, 910 pounds of bran, 3570 pounds of skim milk, and were kept on barley and rape pasture 49 days, and hogged down 3⅓ acres of corn. The cost per pound of gain was two cents.

The principal feeds used in the contest and the prices charged were as follows: Corn, 50 cents per bushel; barley, 45 cents; rye, 60 cents; bran and shorts, $19 per ton; screenings, $10; skim milk, 25 cents per 100 pounds; pasture, ½ cent per day, and corn hogged off, $8 per acre.

The contest was conducted by the Better Farming Section of the North Dakota Experiment Station and was open to farm boys and girls from ten to eighteen years of age. The condi-

HOG RAISING VS GRAIN FARMING

RETURNS FROM EQUAL CAPITAL IN EACH - - NORTH DAKOTA PORK PRODUCTION CONTEST



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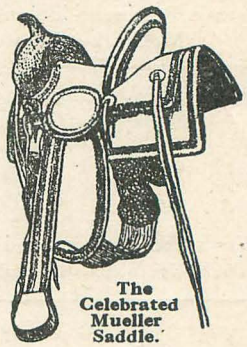
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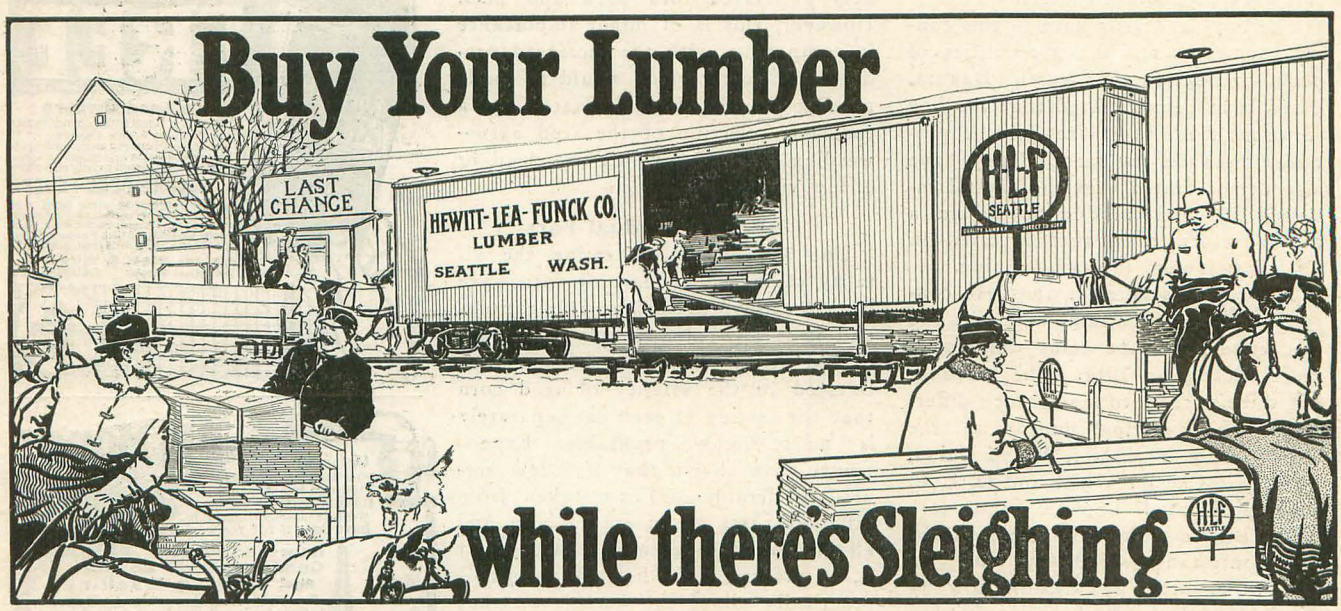
Expert welders and machinists of ALUMINUM gear and crank cases; manifolds and housings; CAST-IRON and cracked sectional boilers; cracked or broken cylinders or water jackets; STEEL frames or any broken parts of automobiles or other machinery. We weld cracked steam boilers with our large portable plant at your home.

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tions being to see who could produce the most pork from a litter in the shortest time and at the least cost. Instructions were sent the contestants from the Experiment Station, as to selecting the sow and as to the feeding and care, and many of the contestants also received instructions from the County Agents. Each contestant was required to send in a report each week covering the feeds used during the week. The weighing up at the end of the contest was done by the representatives of the North Dakota Experiment Station.

It is interesting to compare the sow with an acre of land. Each has about the same value, yet it would be difficult to make acres average $78.10 which the 24 prize winners realized from their litters after paying for the feed. It will take a good many acres together to do that.

The hog furnishes a market for the



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That's what you'd like to know about the house or barn you've been thinking about—maybe you have never had a bill of materials made. Get the H-L-F House Pricer—it's free (use the coupon). Answer a few questions and we'll tell you just what it will cost you to build.

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Prices will be the delivered cost—*no extras guaranteed.* You'll be amazed at the lowness of our prices. It's the price of the producer to you, direct. No middleman's profits to pay. You'll be delighted with the quality of H-L-F lumber. It's clean and straight—the finest kind of material. We guarantee quality, grade, count and complete satisfaction.

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Gentlemen—Please send me the following: (Please write plainly).

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() H-L-F House Pricer (Free).
() Freight-paid price H-L-F Silo. Diameter.....ft., height.....ft.
() Prize Plan Book (send 10c).
() Barn Builder's Guide (send 4c). () Millwork Catalog (Free).
() Information on H-L-F patented Stud and Wall Board. () Plan Sheet (Free).

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When are you going to build?.....

farm produce right on the farm and it has been demonstrated in this contest that the hog pays about twice what the market does. The hog will also make use of many things that there is no market for.

It is doubtful if pork can be made any more cheaply in the so-called corn belt than it has been produced in this pork production contest.

The boys and girls have in this contest demonstrated the possibilities of pork production in North Dakota. They have demonstrated that the hog furnishes the best market for the produce raised on the farm. They have also demonstrated that the capital invested in pork production brings a higher return than that invested in land that is used in grain farming.

The results secured in the 1913 contest were much the same as in the one just closed, tho the gains were made more cheaply in 1914. The breed of hog did not seem to make much difference. The principal breeds as the Duroc Jersey, Yorkshire, Poland China, Berkshire, Chester White and O. I. C. were represented.

There were twenty-six prizes offered the contestants—$340 by the St. Paul Stockyards, a Yorkshire sow by Canfield of Lake Park, Minn. and a Yorkshire sire by L. A. Knoke of Willow City, N. D.

THE GERMINATION OF SEED CORN

Excerpt from Farmer's Bulletin No. 253

The Value of a Germination Test

The importance of testing the vitality of corn which is intended for planting can not be overestimated. It is strange that farmers are willing to plant corn without first being reasonably certain that every kernel put into the ground is capable of producing a good healthy plant.

Farmers have so long been accustomed to having a stand under ordinarily favorable conditions varying from 60 to 85 per cent, that many have come to think a stand of 95 per cent or more is impossible. Yet experiments have shown that, barring unfavorable weather at planting time, the work of brugs, wireworms, etc., there is no reason why a stand of corn should be less than 95 per cent. Of recent years, however, the conditions have much improved, and never before has there been such a demand for seed corn of high vitality. A few of our best farmers are beginning to realize that one of the greatest factors in profitable corn production is the securing of seed which will show a high percentage of germination.

If each corn grower would give a little time during the early spring to the testing of his seed, the vitality of each individual ear of corn intended for planting could be readily determined. The poor ears could then be discarded and the 2 or 3 millions of bushels of seed corn which fail to grow each spring could be very profitably converted into pork and beef. However, this is of minor importance in comparison with the increased production of corn which would be made possible in the United States by a judicious selection of the seed ears—weeding out those which are dead or of low vitality.

Testing Individual Ears

The advantages of testing the vitality of individual ears of corn have been described in various publications, and it is now almost universally admitted by those who have become interested in the vitality of seed corn that the testing of each ear separately is most highly profitable. Experiments have shown that if a few kernels (preferably six) are taken from different parts of an ear of corn and all are found to germinate well—that is, to produce good healthy sprouts—practically all of the kernels on that ear will likewise show strong vitality. On the other hand, if a part or all of the kernels tested fail to germinate or show only weak sprouts, the proportion will be the same for all of the kernels on such ears.

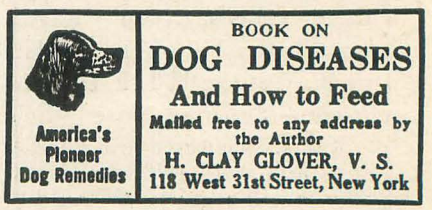
The testing of a hundred or more kernels from the entire lot of seed which has been shelled for planting does not meet the requirements, save, perhaps, in a few very special cases.

Time and Labor Involved

The objection is frequently made that the benefits derived from individual-ear tests do not justify the amount of time and labor expended. This objection, however, is an invalid one and is never made by those who have carefully tested their seed in this way. When it is considered that 12 or 15 ears of corn will furnish enough seed to plant one acre, it can readily be seen that the time and labor re-









quired for the testing is extremely small.

There are undoubtedly special lots of exceptionally good seed of which an individual-ear test would seem unnecessary, but results show that these cases are very rare. By way of illustration, take the sample from Ross County, Ohio, which gave an average germination of 97.3 per cent. Of the seven undesirable ears, Nos. 17 and 36 show a germination of only 70 and 50 per cent, respectively. The five other poor ears each germinated 90 per cent. Granting that each ear contained 800 good kernels which could be used for seed after shelling off the butts and tips, the decreased stand due to the mixing of the seed from these 7 poor ears with the seed from the 42 good ears would be equivalent to 1,200 stalks of corn. If each of these stalks bore an ear weighing only 9.45 ounces the increased yield on the area planted would be a little over 10 bushels.

The germination tests should be made five or six weeks before planting time, but even if it is necessary to take the plow from the field it is far more profitable to have a good stand of corn on 19 acres than it is to have a poor stand on 20 acres, thereby saving the time and labor necessary to prepare the ground and to plant and cultivate the additional acre. Yet many farmers are every year planting and cultivating 3 or 4 acres in every 20 for which they receive no returns.

Selecting Seed Ears

Preparatory to the sampling of the individual ears for the germination tests, it is quite essential that those of desirable type be selected in order to avoid the testing of more ears than is absolutely necessary. This can be best done by arranging the ears on a table or on the floor, or in some such simple manner, so that they can be carefully compared. With the corn spread out in this way the best ears can be removed for seed and the undesirable ears discarded.

Removing the Kernels for Test

The number of kernels to be used for the germination test may be varied somewhat, but six kernels taken from different parts of the same ear give reliable results. The kernels from ear No. 1 should be placed in square No. 1 of the germinating box, the kernels should be placed germ side up.

The kernels can be best removed with a dull pocket knife or similar instrument. Grasp the ear firmly in the left hand, pointing the butt of the ear away from the body. With the knife in the right hand the kernels can be easily removed by forcing the blade down along either the back or the side of the kernels. As the kernel is loosened, grasp it on the opposite side with the thumb and transfer it to the proper square in the germinating box. The first kernel should be taken about 2 inches from the butt of the ear. Give the ear a quarter turn either to the right or the left and remove the second kernel from the center of the ear. Make another quarter turn and take the third kernel about 2 inches from the tip of the ear. Holding the ear in this same position, take kernel No. 4 about 2 inches from the butt of the ear. Make another quarter turn and take the fifth kernel from near the center of the ear. Make still another quarter turn and take the sixth kernel about 2 inches from the tip of the ear. The ear has now been turned completely around, two kernels have been taken from the butt, two from the center, and two from near the tip of the ear. If the work has been well done each set of two kernels was removed from exactly opposite sides of the ear.

At the beginning this work will undoubtedly seem laborious and some of the kernels will be injured, but with a little practice the kernels can be removed rapidly and in perfect condition. It must be remembered, however, that the side of the kernels containing the germ is toward the tip of the ear, and care must be taken that

Continued on Page 14.

MAKE 1915 YOUR MOST SUCCESSFUL CROP YEAR

Let Us Help You ~ Get Our New 1915 Catalog

THE PRESENT world situation puts an absolute demand on the North American farmer to make his 1915 crop the biggest and best he has ever produced. It is going to pay the largest dividends ever earned by the grain grower of this continent and we know that he is wise enough to appreciate and accept this unusual opportunity.

It means that the most careful attention must be given to seed selection for good seed is going to mean gold dollars in the final reckoning.

FARGO BRAND SEEDS

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Your inquiry will bring prices and samples by return mail. Write today.

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ESTABLISHED 26 YEARS

North Dakota Farmer

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Vol. 16 JANUARY, 1915 No. 7

Every highway should be lined with trees.

There are three kinds of farmers, intensive, extensive and pretensive.

The question "Can I afford it?" so often asked by the farmer, might very often better be put thus: "Can I afford not to do it?"

Resolves for 1915: A smaller kitchen, a cistern, fireless cooker, kitchen cabinet, vacuum cleaner, washing machine, gasoline engine, lighting system, steam cooker, water system.

When the New England preacher was asked by a poor farmer to pray for his land, he remarked, after looking at it: "Your farm does not need prayer; what it needs is manure."

Tree planting should become a popular movement on every farmstead, next spring. North Dakota is simply hungry for trees, both for their looks and for their beneficial influence upon the climate.

The announcement that less emphasis will be given to "dog-faced boys, etc.," at the next state fair and more attention given to things educational, should be received with gratitude by the patrons of the fair.

When criticizing the railroads for extortionate rates in hauling to the terminal, don't forget the useless cost per bushel-mile of hauling over poor roads to the elevator, and are not poor roads the farmers' own making?

The thoroughbred bulls which Mr. James J. Hill recently donated to the several sections of the state should very materially improve the quality of North Dakota beef as well as stimulate the interest in animal husbandry.

The Manitoba Agricultural College made experiments in egg production during a period of ten months in which the White Leghorn averaged 160 eggs, while other varieties in pens of twenty each ranged down to 142 and 124 respectively.

The all-important subject of rural credits is still going the rounds. Farmers can solve this problem for themselves the moment they become willing to co-operate for the good of agriculture, have confidence in each other, and establish their own banking system.

Every community should hold a farmers' institute sometime during the winter. Such institute should be a regular annual convention and looked forward to with real enthusiasm. Then everybody in the community old enough to understand should be in attendance.

Whatever may be said pro or con relative to the A. C. "Muddle" this much may be said truthfully—everything in the College is running along smoothly and harmoniously and always has. The president, faculty, and students are on the best of terms, and the work done is entirely satisfactory. The "Muddle" is entirely outside the College.

A bad crop year often proves a good schoolmaster in this, that it teaches true economy. If what is wasted were saved and a surplus maintained in the bank instead of overreaching in order to secure more land or other luxuries that for the present can well be dispensed with, hard times would seldom be experienced in North Dakota.

According to Andy Miller's diagnosis the Experiment Station is a department of the Agricultural Collegethe same as any other department. Then he says the Director of the Experiment Station is responsible only to the Board of Trustees. As there are about a dozen departments of the College, their various heads are responsible only to the Board of Trustees. Andy's inclination to accommodate both sides is commendable.

If the screenings produced in the state and usually given away, with freight added, were fed to sheep instead, it would add millions of wealth annually to the farmers' bank account. Moreover, unless quite a number of "extensive" farmers change their methods, they will soon be producing more screenings than marketable grain. The inroads being made by wild oats, mustard, and French weed are in evidence. Last year and the year previous as high as twenty-six pounds of dockage to the bushel are of record. Too bad!

The week spent at the Agricultural College by the school boy and girl winners in the industrial contests inaugurated by Gordon W. Randlett, was not only enjoyable for the young people but is bound to prove prolific of good results. Give the boys and girls a chance to do some things they will later have to do as men and women if you would give emphasis to a neglected phase of education, but nevertheless of the most important character.

In organizing these industrial contests, Professor Randlett has started a movement that will grow with the years. The world is becoming tired of traditional things that have no practical value, but is hungry for things that recognize a goal and point the way to it.

Now that Tilly Alcartra of the Holstein-Friesian breed, owned by A. W. Morris and Sons of California, has passed the 30,000 pounds of milk for a single year mark, will the bright students of the state please calculate how much money the average of one cow of her milk-producing capacity would earn in fifty years reckoning the butterfat at thirty cents per pound and the accumulations kept at six per cent interest? Tilly Alcartra gave 30,452½ pounds of milk in one year, which contained 951½ pounds of butterfat. Send answer to North Dakota Farmer.

With a half-dozen good cows intelligently handled; with fifty healthy hens well fed and well housed; several pigs of good breeding, all on a fair farm with a good sized garden, and a family of moderate size can defy both worry and the wolf. What's the use of exploiting a section or two of land any way, with all the worry and drudgery and disappointments, when a small tract intelligently managed will afford every physical comfort without the many annoyances that beset the "big" farmer? Many small farms, intensively cultivated, will yet be the glory of the state. On the other hand bonanza farming never yet did more than enrich, or impoverish, as the case may be, the few at the expense of the soil.

Pure Food Advertisers

The products advertised below are in compliance with the pure food law of North Dakota and of the highest grade. ASK YOUR GROCER FOR THEM.



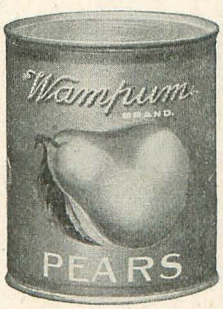
"Gee—— they're good!"

A boy in school defined wholesome food as—"stuff you kin eat's long 's you kin hol' some."

WAMPUM
Canned Goods

are wholesome as well as delicious. Give growing children plenty to eat. WAMPUM brand won't hurt them. Sanitary, enamel-lined packages make contents SAFE. Highest EXTRA-standard quality; reasonable price.

A brand of Canned Goods from S-O-W Company is a big asset to a dealer.



STONE-ORDEAN-WELLS COMPANY
"Largest in the Northwest"

Our Candies Are Pure

Chaney-Everhart Co.
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"BUY" "EAT"

HOME BRAND
Pure Food Products

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Griggs, Cooper & Co.

MANUFACTURING WHOLESALE GROCERS,

ST. PAUL, MINN.

Main Offices:
CORNER THIRD AND BROADWAY

DR. PRICE'S JELLY DESSERT

NUTRITIOUS-WHOLESOME

One package, 10 cents, makes one pint of wholesome Fruit Jelly. All flavors from true fruits.

MONARCH BRAND



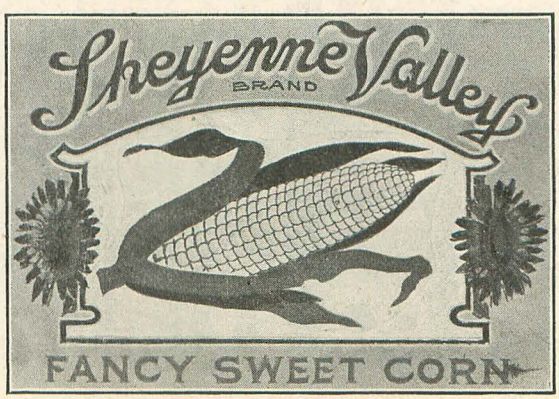
FOOD PRODUCTS

A GUARANTY OF PURITY. A WELCOME GUEST at every table where the HOUSEWIFE demands the BEST. THE MONARCH LABEL insures QUALITY in Coffee, Catsup, Pickles, Maple Syrup, Canned Goods or any article bearing the MONARCH BRAND of REID MURDOCH & CO CHICAGO.

Eat North Dakota Sweet Corn

Sanitary

PACKED BY ONLY FACTORY OF ITS KIND IN THE STATE. SEALED IN SANITARY CANS AT OUR MODERN THREE-STORY FACTORY



Delicious

NORTH DAKOTA CORN EXCELS IN SWEETNESS.

ASK YOUR GROCER FOR OUR BRAND.

WRITE FOR PARTICULARS

Sheyenne Valley Canning Co. - Lisbon, N. D.

Another Big Surprise From Bill Galloway—Listen!



New Profit-Sharing, Price-Reducing, 1915 Selling Plan.
Practically Makes Every Customer a Galloway Stock Holder.

Ten years ago the Wm. Galloway Co. was a mere infant among manufacturing concerns—barely able to sit up and take notice—its birthright was just an idea and its future depended entirely upon how the farmers of America liked that idea.

The idea that I had in mind was this—To actually manufacture the implements the farmer needs and to sell them to him direct from Factory to Farm—sell them at rock-bottom prices that wouldn't have a penny of agents' and dealers' profits in them.

This idea of mine, put in practice, scored a big hit with up-to-date farmers. My low prices were a big surprise and my high-grade goods pleased every man who bought of me. Business came by leaps and bounds and every order meant a pleased customer. Today my idea has grown into an institution doing a business that runs into the millions. I have customers by the tens of thousands from Coast to Coast and from Canada to the Gulf. Imitators of this plan have sprung up from time to time but they have fallen by the wayside, while the Galloway Co. has grown larger and better.

A few years ago—before I started in to make and sell Galloway products—farm appliances were sold through the jobbers, agents and dealers and each made a profit on them. A 5 H. P. engine then cost you $250.00 to $350.00, a cream separator $95.00 to $150.00, a manure spreader $125.00 to $135.00.

I cut those prices right square in two—sold those articles for 50% less—right off the reel. Then as my factories grew and my output increased, from year to year, I lowered my early-day prices every time I cut down my factory expenses. Today I'll sell you a real 6 H. P. engine—a crackerjack, quality and satisfaction guaranteed to you—for only $98.75. I'll sell you a cream separator as good as any made, and a whole lot better than most of them, for $42.50, and an absolutely first-class spreader at a price any farmer can afford to pay—from $64.75 on up.

Here It Is—Like Getting Money From Home

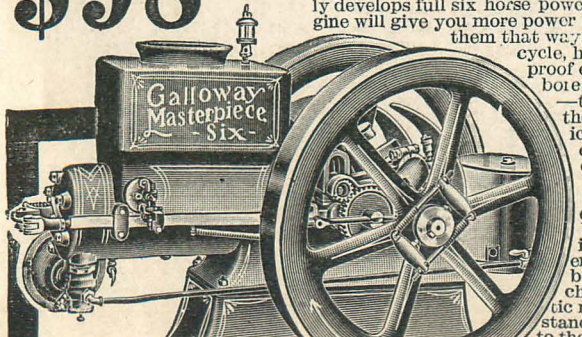
Now, I'm offering you a bigger value than ever this year—1915. I'm going to make the bargains you get of me, in high-grade, low-priced goods, bigger than I ever could before.

I want you to be a Galloway customer and I'm going to give you a share in Galloway profits in addition to the value you get in my goods. I'm selling this year on a new plan—you get the benefit of a sliding scale, price-reducing schedule that, in effect, practically makes you a Galloway stockholder without your investing a cent, except in Galloway goods that give you a big value received in service. The more engines, separators, spreaders, etc., that I make and sell in 1915 the less these articles will cost you. Prices slide right down as my production goes up and you get the benefit. Get my proposition today. It's a big thing—best and biggest offer ever made.

A Real 6 H. P. Engine Now Only

$98.75

Or Even Less On My Price Reducing Sliding Scale Plan



By "real 6 horse power engine" I mean one that actually develops full six horse power. Any Galloway engine will give you more power than rated. I make them that way. A horizontal, four cycle, hopper cooled, frost-proof engine, with a big bore and a long stroke—the ideal type for the farmer's service. As simple, easy to handle, strong and as durable as an engine can be. Made in my big engine factory, by skilled mechanics, on automatic machines. Every part standardized and machined



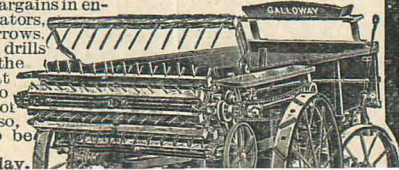
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The Greatest Merchandise Book Published

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I save the farmers of this country a million dollars every year on goods they buy of me in the first cost of the goods alone, and I give them quality in everything they buy of me, too. I don't sell anything that doesn't have quality—don't want to, couldn't afford to if I did.

My big catalog offers you bargains in engines, cream separators, incubators, brooders, manure spreaders, harrows, elevators, gates, fencing, grain drills and dozens of other necessities for the farmer's daily use—bargains that mean a big saving, in actual cash to you. It contains bargains in all sorts of household appliances and furniture, also, and every one of them is big enough to be worth your attention.



You need my catalog. Send for it today.

acy. Every part made of absolutely high-grade engine material. Carefully inspected — fully guaranteed.

The Power Sensation of the Year

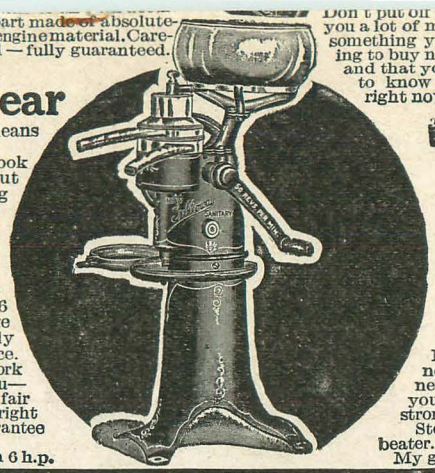
I want you to look closely at this engine and to consider what it means to you to be able to buy it at the price I make to you.

Hunt up every engine catalog and price list you can find and look them over on this price question. See if you can find anybody but Galloway offering a guaranteed-to-be-high-grade engine, developing more than 6 horse power, for the price I quote. Ask any man who is selling engines to sell one of that capacity to you at my price and to send it to you on trial and put the kind of a guarantee on it that goes on my engine.

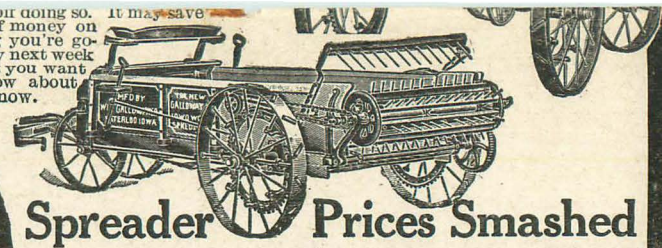
You'll find that there's only one place where your money will buy this big engine value. I positively give you more for your money in this engine than you get anywhere else and remember, my 6 H. P. is a real 6 H. P. engine and then some. I don't short change you on power or in quality or on price. This engine will absolutely satisfy you in power, fuel economy, reliability, durability in service.

I'll send you this engine on 30 days' free trial and you can put it to work and test it in any way you want to. Find out just what it will do for you—how it will save you labor, time and actual money. Judge it by any fair standard an engine can be judged by. If it doesn't satisfy you send it right back to me at my expense. It's guaranteed in every way and the guarantee backed by my $25,000.00 bond.

Do you want to save $60.00 to $250.00 when you buy an engine from 6 h.p. to 16? If you do you'll buy a Galloway. I make engines of every practical size and for every service. I sell them all at Galloway low prices and under my new profit-sharing schedule



Don't put off doing so. It may save you a lot of money on something you're going to buy next week and that you want to know about right now.



Spreader Prices Smashed

Now Only $64.75 and up

Give your fields a chance to grow more stuff for you. My New No. 8 Low-Down Manure Spreader, used right now, will mean a bigger crop next year. You know that. My New No. 8 is absolutely the best spreader you can buy any place. It's got every good quality a spreader could have—strong, dependable, good for long years of service.

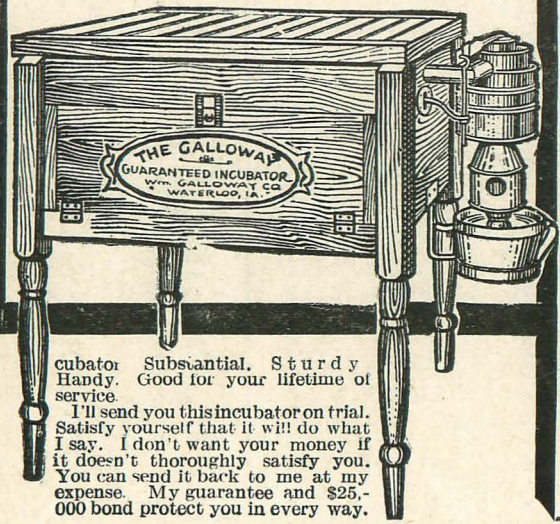
Steel gears, coupled with steel channel, steel wheels, flexible rake, high speed beater. Double chain drive. Endless apron. Force feed.

My great book "A Streak of Gold" is free to you. Tells all about the profitable applying of manure. Write for it today for price reducing schedule.

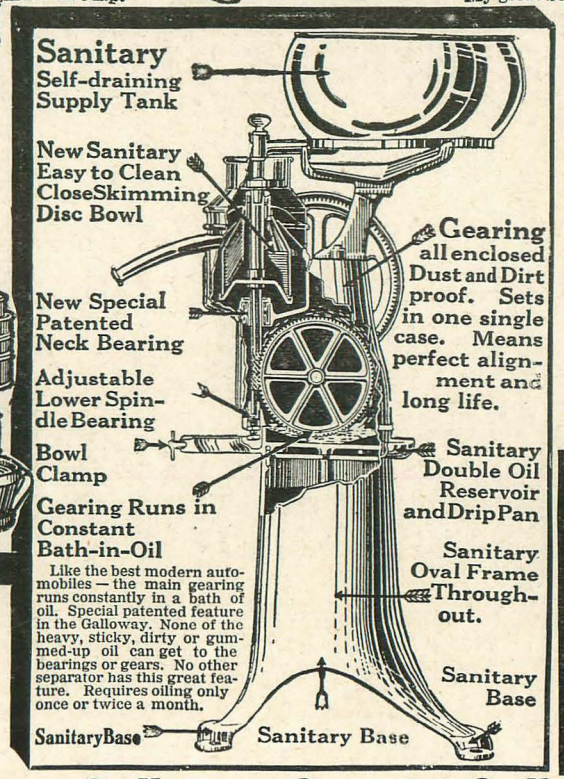
My Incubator Backed By a $25,000.00 Bond Guarantee

Here's my new incubator—a genuine Galloway value. Made as good as an incubator can be and sold at a Galloway price that puts it way ahead for the man who wants full value for his money.

Built on scientific principles by skilled incubator specialists. Hatches any eggs that can be hatched by any incubator. Substantial. Sturdy Handy. Good for your lifetime of service.



I'll send you this incubator on trial. Satisfy yourself that it will do what I say. I don't want your money if it doesn't thoroughly satisfy you. You can send it back to me at my expense. My guarantee and $25,000 bond protect you in every way.



My Cream Separator Prices Have Gone Down--Down--Down

I'm making, right now, the best cream separator that's made—the New Galloway Sanitary Cream Separator. I'll put my separator up against any other machine made for a three months' test; you to be the judge of the performance of both machines. If you think, at the end of three months, that there's any cream separator on earth you'd rather have than the Galloway you can send my separator back to me. I'll pay every cent of the freight both ways. You won't be out one penny.

I'm selling this separator at a price that will absolutely save you from $35.00 to $50.00 on first cost alone. I can prove that to you. I'm going to save thousands of dollars for separator users this year and please hundreds of new customers with my separator.

Cut Out Coupon—Get Catalog and Special Proposition

This coupon will bring you any Galloway catalog you want, free. Just fill in the blank line with the name or names of what you want, write in your name and address and mail me the coupon. I'll send the catalog by return mail.

Wm. Galloway, Pres., Wm. Galloway Company
987 Galloway Station, Waterloo, Iowa

I am interested in
(Give name or names of articles you might want.)

Please send me your Catalog and full information about your new, profit sharing, price reducing, sale plan.

Name

R. F. D

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THE GERMINATION OF SEED CORN

Continued from Page 9.

the germ is not injured during the sampling.

The Germinating Box

Many kinds of germinating boxes and methods for testing seed corn have been described in various publications from different sources, any one of which will give good results if properly handled.

A germinating box can be made in a few minutes' time from any boards picked up about the cribs or other farm buildings. The box should be about 1½ or 2 inches deep inside and the length and width such as to suit the needs of the individual farmer, but it should not be made watertight. A box 18½ inches long and 12½ inches wide, inside measurement, affords sufficient space for the testing of 54 ears of corn at one time. Instead of filling the box with sand, soil, or sawdust, as is commonly recommended, the seed bed is made of heavy canton flannel or similar material, having two or three thicknesses of cloth in the bottom of the box and one or two thicknesses of cloth for covering the kernels after the squares have been filled. A new cloth should be thoroly washed before using.

If canton flannel is to be used, it is well to bear in mind that it comes 27 inches wide. A box of the dimensions above given is just the right width for the canton flannel once folded, allowing for shrinkage. With a lead pencil, mark the cloth into squares 2 inches each way and number them.

For use, first wet the cloth thoroly by soaking in water and then place the half of the cloth, double thickness, which has been marked in squares, in the bottom of the germinating box. The kernels from ear No. 1 are then placed, germ side up, in square No. 1, and so on, as already described. When all of the squares have been filled, fold the other end of the cloth carefully over the kernels. If during the sampling the cloths have become dry, sprinkle them well with water. Cover the box with a piece of glass (oil-cloth may be used) to prevent the evaporation of the water from the cloths, and set the box aside for a few days to await the results of the test.

The principal advantage of a germinating box of this kind is that it is almost impossible to injure the corn by the addition of too much water, as is frequently done where tests are made in soil or sand. Moreover, the entire development of each kernel, both root and stem, can be observed and the sampling can be done in about one-half of the time required when sand or soil is used.

Where only a limited number of ears are to be tested a similar germinating apparatus may be made by using cloth between two dinner plates. Ten-inch plates will give ample space for the testing of 18 or 20 ears at one time.

Care of the Germinating Box

If the preliminary work has been well done the germinating box will need but little care until the sprouts are ready for counting.

Moisture. The moisture necessary for germination is supplied from the wet cloths, and in most cases the first wetting will be sufficient to complete the test. However, if at any time the cloths become dry they should be moistened by sprinkling a little water over the top. If a piece of glass is used for the cover, as recommended, the amount of water condensed on the under side of the glass will usually show whether there is a lack of moisure.

Temperature. Corn germinates best at a temperature alternating between 65 degrees and 85 degrees F., representing in a way what actually takes place in nature, the higher temperature prevailing from 4 to 6 hours during the day and the lower temperature at night. Temperatures such as are found near the stove or furnace in an ordinary country home approach these conditions quite well. It is important, however, that the temperature does not get too low during the night; a drop much below 55 degrees F. will seriously affect the reliability of the test.

Counting the Sprouts

The kernels should begin to germinate freely about the third or fourth day, but the counting should not be done until the sixth or seventh day, or until most of the shoots or stems are from 1 to 1½ inches long. This part of the testing must be done with considerable care and requires good judgment, as kernels will be found in all stages of development. The thoroness of the testing depends on proper selection at this time.

Ears to be Saved for Seed

If the six kernels in any one square in the germinating box show six good healthy sprouts, the ear which they represent should be taken for seed. If one of the six kernels fails to germinate, or gives even a weak root or stem, the ear which it represents must be discarded as unfit for seed. There will also be cases in which all six kernels have germinated, but will be lacking in vigor. Under the most favorable conditions kernels of this kind might produce a good ear of corn, but as the chances are that they will never develop, or else will produce only a barren stalk or perhaps a nubbin, such ears should not be used for seed. It is thus only necessary to remember that all ears showing dead kernels or weak and poorly developed sprouts must be discarded and only those used for seed in which every kernel tested has given a good healthy sprout.

The Final Grading of the Seed Ears

The ears which have shown a perfect germination are now ready to be butted and tipped and shelled for planting. In order to insure further uniformity in planting it is advisable to sort the ears before planting into two or three grades, according to the size of the kernels. This grading may be done by screening, if more convenient.

Marquis Wheat : Genuine

Car Lots or Less
Write for Samples and Prices

Steele, Briggs Seed Co.
WINNIPEG, CANADA Limited
CANADA'S GREATEST SEED HOUSE

FOR SALE

Case Steam Plowing and Threshing Outfit, 25-90 H. P. Engine; 36 x 58 inches Steel Separator. 8 Bottom Emerson Plow. 12 barrel tank. All complete with accessories. Nearly good as new. $2500.

ADOLPH ANDERSON
Dawson - - - - N. D.

Livestock Department

FARM AND STOCK NOTES
N. J. Shepherd

With all stock any setback in growth is a total loss.

Wasteful feeding may mean either too much or too little.

The richest part of any manure is that which water will wash out.

Have conditions that will compel the fowls to work for a portion of their food.

The lump in the manger is the best method of supplying salt to the horse.

Avoid cutting large limbs from fruit trees. Prune annually and it will be seldom necessary.

The richer the farmer's soil the greater his resources and the more secure his investment.

So far as can be done the dairy cows should have access to water after eating.

A good ham, short nose and legs, and long deep body is the type for a brood sow.

More time is spent and poorer results obtained if work is not done at the proper time.

Too much confinement and lack of mineral foods are the most frequent causes of leg weakness in fowls.

It is a good policy to keep for layers and breeders the pullets which round out into maturity first.

Taking care of the tools and implements is one of the best methods of economizing on the farm.

It is the unproductive things—things that are neither growing or producing

ST PAUL UNION STOCKYARDS COMPANY, SOUTH ST. PAUL, MINN.

Comparison of Receipts and Shipments of Livestock for December, 1914

Receipts

Railroads	Cattle	Calves	Hogs	Sheep	Horses	Total Cars
C. R. I. & P.	347	62	884	21	8	30
C. G. W.....	1253	167	7673	470	39	158
C. M. & St. P.	4465	634	30586	7235	291	647
M. & St. L...	1694	439	10649	1156	22	226
C.,S.P.,M.&O.	4336	701	29885	7524	91	654
C. B. & Q....	589	58	5964	1227		109
M.St.P.&S.S.M.	9138	1205	49299	5502	59	1041
Gt. Nor.....	10761	2073	66566	19862	277	1351
Nor. Pac.....	7070	459	38336	27555	594	858
St. P. B. & T.	33					1
Driven In....	671	113	1238	150	30	
Total.....	40357	5911	241080	70702	1411	5075
Increase.....	9430		79670	12151	1220	1425
Decrease.....		565				
Jan. 1 to date	467710	117453	1589630	794739	5683	45232
Inc. over 1913	51712	1505	332829	9295	480	6387
Decrease.....						
Average Wts.	832	203	191	82		

Shipments

C. R. I. & P.	655				657	53
C. G. W.....	2568	9	17266		86	249
C. M. & St. P.	6399	70	45972	10007	143	671
M. & St. L...	386	3	2955	631		40
C., S.P.,M.&O.	4505	181	27949	8706	59	433
C. B. & Q....	2344	7	11294	15750	85	261
M.St.P.&S.S.M.	982	38		5902		66
Gt. Nor.....	1484	29		4588	26	72
Nor. Pac.....	540	15		225	200	33
St. P. B. & T.						
Driven Out..	703	181	1114	21	69	
Total.....	20566	533	106550	45830	1325	1878
Increase.....	1168		54278	16072	1121	615
Decrease.....		384				
Jan. 1 to date	303718	23957	531207	565253	5547	18054
Inc. over 1913	4848	980	11350		362	2407
Decrease.....				30824		

CLASSIFIED ADS.

One Cent a Word

Small advertisements will be classified under appropriate headings at the low price of one cent a word for each insertion. Cash must accompany all orders. Each initial or number must count as one word. TRY IT HERE.

LIVE STOCK

RED OAK DUROC GILTS

I have 50 finely bred gilts for sale, all dating back to champion bred sows and boars, and bred to such boars as Johnson's Defender, Golden Model Wonder and Red Oak Col. All champion bred. Write us for prices on these gilts. Get a start in these fine hogs and let them make some money for you. Farm adjoining Oakes.
H. J. JOHNSON, : : OAKES, N. D.

FOR SALE: Chester White Gilts Bred to Dakota's Pride, a son of Sweepstakes No. 28006, the hog that weighed 1260 pounds. Also Pigs at weaning time.
THE PRATT FARM
Geo. A. Pratt, Prop. : Cooperstown, N. D.

Minnesota Highest A. R. Record Guernseys
Twenty cows average 514 pounds fat, equal to over 615 pounds of butter
World's Greatest Herd of A. R. Red Polls
Whole Herd averages 422 pounds fat, equals to 506 pounds of butter
Bulls for Breeding Clubs to Suit All Pocketbooks
Jean Du Luth Farms, Inc., Duluth, Minn.
Geo. P. Grout, Managing Owner

For Sale. Registered Holstein Bull 11 months old, Three-fourths white. Of Pontiac Korndyke breeding. Also a few bull calves of same breeding. John Walsh, Northfield, Minn. R. 4.

DURROC JERSEY GILTS AND WHITE HOLLAND TOMS
Am offering only my choicest gilts bred to Crimson Model 4th for March, April and May farrow. Pedigrees furnished. **Roy W. Jacobs, Wadena, Minn.**

POLAND CHINA PIGS, also Shropshire sheep. Seed grain. **GEO N. SMITH.**
Amenia N D.

ASH GROVE FARM. Knudtson & Son, Props.
Breeders of Pure Bred Percheron Horses and Short Horn Cattle, Both Sexes. Stock for Sale.
Route 1 Fullerton, N D.

J. S. BIXBY
RED POLL CATTLE. If you want dual-purpose cattle, I have the best. Rhode Island Reds, also in stock. **LISBON NORTH DAKOTA**

SHORT HORNS
Young stock for sale. All registered.
Jim Uglum, - - - Bowbells, N. D.

REGISTERED POLLED SHORTHORN CATTLE AND BOURBON RED TURKEYS.
Some good young Bulls for Sale.
Odessa Stock Farm, - Devils Lake, N. D.

Meadowlawn Farm. The largest breeders in North Dakota. Percheron Horses, Shorthorn Cattle, and Berkshire Hogs. Where quality counts. Address:
A. H. WHITE, - - - Kramer, N. D.

For Large Yorkshires of either sex and bred gilts, address **L. A. Knoke, Badger Den Stock Farm, Willow City, N. D.**

Choice Poland China Hogs always on hand Bred Gilts all sold, Register now for spring pigs, either sex; prices right. **Thos. Forbes, Petersburg, N. D.**

HIGHGRADE LIVESTOCK: Clydesdales, Double-standard Polled Durhams. Farm Horses and Drivers.
Leal Stock Farm, - - Leal N. D.

PERCHERONS FOR SALE
We are offering a choice lot of young mares and stallions, all raised here on the farm and thoroly acclimated.
WHITE BROTHERS
Valley City - - - - North Dakota

ENVILLA STOCK FARM
Envilla Stock Farm, Cogswell N. D will quote you special prices on Angus Cattle, Shetland Ponies, Duroc Jersey Hogs. Wolf Hounds, Collies, Rat Dogs and other breeds. Angora Cats. All varieties of chickens; turkeys, geese, ducks, guineas, pheasants, rabbits, ferrits. Pets. Live Foxes, Skunks, Mink and Badgers.

FOR SALE: Duroc-Jersey Boars including Herd Boar; Shropshire Ram Lambs; Barred Plymouth Rock, and Single and Rose Comb R. I. Red Cockerels, Dark Muscovy Ducks.
E. W. SMITH, : : : BUFFALO, N. D.

DUROC JERSEYS Gilts out of such sows as Golden Model Queen 6th, Model Beauty and other sows as well bred as could be bought at the sales last winter. Write H. N. HOLME, Jasper, Minn.

MAPLE LODGE LARGE YORKSHIRES

March and May pigs, $10 up, also a few fall pigs, stock of good type and strong bone. Bourbon Red Turkeys, $2.50, and up. Partridge Wyandottes, (winter layers) stock and eggs, $1.50. **Edward Klebaum, Egeland, N. D.**

POLAND CHINA SPRING GILTS

That I am Breeding for Spring Farrow. A Couple of April Boars at Right Prices. Fall Pigs at one-half Price. Write to

W. M. KLICHE
R. No. 2 - - - Montrose, Minn.

Shorthorn Bull

I have a dairy shorthorn bull for sale, four years old, all red, registered, and a fine individual. Price $250 f. o. b. cars; have also a great Poland China herd boar for sale, three years old, a good one: also five spring boars, and a few sows being bred now. Good stuff.

Address
H. P. BENGSTON, - Granite Falls, Minn.

MISCELLANEOUS

WANTED. Live Foxes, Skunks, Mink and Badgers, any time.
Envilla Stock Farm, - - Cogswell, N. D.

Field Inspected "Pedigree Barley" and No. 1 Hard "Marquis Wheat." Taking orders this month only to be shipped in February. Watch the exhibits at Fargo the coming January, especially "Garton's Pedigree No. 5" Oat. **Joe Stahl, : : : Pekin, N. Dak.**

POTATOES go 300 bushel to acre **CORN** 60 bushels to acre in HUBBARD COUNTY. Rich clover and dairying lands, near beautiful lakes, good towns, schools, roads, at very low prices. Write today to **Miller Bros. Land Co., Park Rapids, Minn.**

SEED CORN

Pure White Flint, $1.00 per bu., F. O. B., Golden Valley, N. D. Bags free. **S. R. Martz, Loring, North Dakota.**

SALESMEN—EARN $2000 to $4000 A YEAR NEW Combination, 12 tools in one. Sells at sight to contractors, farmers, teamsters, fence builders, threshers, miners. Weighs 24 pounds lifts 3 tons. Stretches wire, pulls posts, hoists, etc. Chance for men who want honest money making proposition. Harrah Manufacturing Co. Box M, Bloomfield, Ind.

WANTED to hear from owner of good farm for sale. Send cash price and description.
D. F. Bush, Minneapolis, Minn.

Firemen, Brakemen, railroads near your home, $100-$120. Experience unnecessary. Send age, postage. **Railway Association, Dept. P-92, Brooklyn, N. Y.**

ALFALFA SEED DIRECT.
Sample and growers price on application.
J. L. MAXSON, BUFFALO GAP, S. D.

A Pure Bred Jersey



bull counts for more than the dam in grading up. You should be developing some 400-pounds-of-butter cows. The thoroughbred bull is worth all he costs on grade or full-blood Jersey cows. Like begets like.
THE AMERICAN JERSEY CATTLE CLUB
324 W. 23d St., New York City.

—that steals the profits from the farm.

To secure the best results the training development of the animal for the purpose desired must accompany the breeding.

Food is the most expensive barn and blanket with which to keep the animals warm. Give them shelter and the food.

The longer the orchard is kept in cultivation and a crop taken off, the greater becomes the necessity for liberal manuring.

Whenever an animal is shrinking or going back you are losing not only the pound of weight, but you are losing in the vigor of the animal and weakening the digestive organs of the animal.

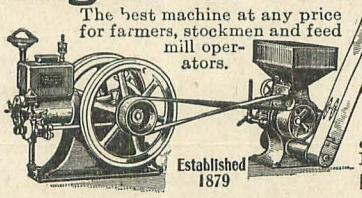
It is the rapid growth that pays the best; it is in the weight that is put on when the animal is fed beyond the food of support that is the profitable weight, the best profit comes when the animal is doing its best.

Sheep should never be kept beyond the age of thrift and vigor. Feed and care will bring better returns when bestowed upon younger stock. Young and vigorous animals put on more flesh for the same quantity of food than older ones.

One of the best remedies to protect fruit trees from rabbits' gnawing the bark is to take one quarter bushel of lime, one-half pound of copperas, and one-half pound of glue. Add the glue and copperas dissolved to the lime,

Engine & Feed Grinding Outfit

The best machine at any price for farmers, stockmen and feed mill operators.



THE HOWELL ROLLER FEED MILLS have been wonderfully successful everywhere. They wear a life time, grind twice as fast with the same power as the best burr or stone mill made. Good money in custom grinding. Grinds Graham and Rye Flour as well as feed. Engine is of latest and most up-to-date design. Runs at proper speed to obtain best grinding results. Simple and Durable. Free Catalog D3 tells everything.
R. R. HOWELL & CO., Minneapolis, Minn.

ST. PAUL UNION STOCKYARDS COMPANY, SOUTH ST. PAUL, MINN.

Comparison of the Origin and Disposition of Livestock for Decdmber, 1914

Origin of Livestock Received

States	Cattle	Calves	Hogs	Sheep	Horses	Total Cars
Minnesota...	20214	4902	113740	14500	218	2349
Wisconsin....	4761	811	40581	7418		772
Iowa.....	48	15	314		88	12
Far South....					45	2
So. Dakota...	1310	2	14765	1329	190	273
No. Dakota...	6280	125	55116	10494	394	972
Montana.....	2510	11	5750	36302	278	335
Far West....					198	9
Manitoba & NWT	193	15	10814	358		348
Far East.....						
Returned....	41			301		3
Totals.....	40357	5911	241080	70702	1411	5075

Disposition of Livestock

So.St.Paul P'k'rs.	21436	4858	134569	26291		
Cy. & St. Butch.	612	17	21270			203
Outside Packers	1901	114	82958	7447		819
Minnesota...	4902	246	126	6152	244	194
Wisconsin....	189	3		125	24	10
Iowa.....	1999	7		2716	45	83
Nebraska....	2107	63			46	67
Kans. & Mo..	860					40
So. Dakota....	2074			220	20	58
No. Dakota...	979	45		1109		31
Mont. & West					159	7
Far South....						
Manitoba & NWT						
Mich. & E. Can.						
Chicago.....	4892	38	1115	25505	764	351
Ills.(ex Chicago)	29				23	2
Eastern Points			93	2255		11
Serum Plants			988			
Returned....	22			301		2

after slacking, and apply with a brush.

The farmer who raises plenty of livestock and raises plenty of grain and roughage to feed it up to the standard is the one who makes the most money. Buying livestock and buying the feed for it is a kind of business that involves great risk.

FARMERS SHOULD RAISE WELL-BRED HORSES FOR THE INCREASED EUROPEAN DEMAND

During the next decade there will probably be an increased demand for American horses in the countries now engaged in the European war. The demand may even continue much longer, as not only will horses be needed for armies, but when peace is restored more will be needed for agriculture. Already European agents are said to be endeavoring to purchase horses in this country and Canada, and there is an increased interest in many sections in horse breeding.

To meet this increased European demand, American farmers may well endeavor to raise well-bred horses, but the department does not advise them to purchase a surplus of horses merely for breeding purposes. It merely advises that ordinary farm work should be done whenever possible by good mares, which should be bred to good stallions. It also desires to emphasize the fact that only horses of high quality may be profitably raised today. Inferior horses are a drug on the market, and their production is to be discouraged as much as the production of good horses should be encouraged.

The United States has previously been drawn on to supply European countries at war. In the Boer War over 100,000 horses were bought here by the British Government. It may be doubted whether a foreign government could now obtain a similar supply in this country, except at excessive cost. However, if farmers take pains to utilize their good mares during this winter to breed them to good stallions, in the course of several years (time enough for the foals to develop) America will be better able to meet the European demand.

It is natural that European countries should look to the United States for horses, as next to Russia it has more of these animals than any other country in the world. The United States and Russia possess 58 per cent of the world supply. Strange to say, however, there were no horses originally on our continent and the present supply comes from stock brought over from Europe. Canada's supply is small compared to our own.

Our own Army furnishes a desirable market for well-bred horses, there being under the remount system at least 5,000 horses required annually to supply both the Army and the National Guard. There are now about 20,000 horses in our Regular Army on a peace basis. In war, many more would be required before the first engagement. There is, therefore, a steady market for good horses independent of the European demand. Even the invasion of motor power, which has reduced the number of horses on our streets, has not influenced this demand. In fact, the price of horses has advanced along with other commodities during recent years.

The Bureau of Animal Industry of the Department of Agriculture stands ready to aid any farmer desiring to breed high-class horses. As the day of the large horse ranch is practically gone, any increased demand will have to be met by the farmer. There are certain localities more suited to horse breeding than others and places where certain breeds do better. Such details may be obtained for the asking. Even in the South, where mules are bred in preference to horses, an increased production of first-class animals should find a ready market abroad, altho the mule is not used on the Continent to the extent that it is used here.



Two O.I.C. Hogs Weigh 2806 lbs.

Why lose profits breeding and feeding scrub hogs? Two of our O. I. C. Hogs weighed 2806 lbs. Will ship you sample pair of these famous hogs on time and give agency to first applicant. We are originators, most extensive breeders and shippers of thoroughbred hogs in the world.

U. S. Govt. Inspected Herd

We have bred the O. I. C. Hogs for 51 years and have never lost a hog with cholera or any other contagious disease.

Write—Today—for Free Book "The Hog from Birth to Sale"

THE L. B. SILVER CO.
544 Vickers Building, Cleveland, Ohio

Poultry Department

The disposition of the male bird has considerable to do with the fertility of the eggs. A male that is greedy and quarrelsome is apt to drive hens away from the feed, and gulp down more than is good for him. Such males become overfat and consequently sluggish. On the other hand, the too gallant male will stand back while the hens are helping themselves. His condition becomes as bad as that of the greedy fowl, for he is underfed and has not the proper strength to fertilize.

HISTORY OF THE ASIATICS

The Asiatic Class is composed of the Light and Dark Brahmas, the Buff, Partridge, Black and White Cochins, the Black and White Langshans. The entire class are feathered-legged birds.

The Light Brahmas are the heaviest of the class, the standard weight being: cock, 12 pounds; cockerel, 10 pounds; hen 9½ pounds; pullet, 8 pounds. The Dark Brahmas are one

BEITH'S WHITE WYANDOTTES

Winners at Crookston, St. Paul, Minneapolis and Fargo, N. D. Our birds are bred to lay as well as they are bred to win.

J. C. BEITH
Wheatland - - North Dakota

Those interested in poultry reading will find it to their advantage to send to E. C. Stearns & Co., Syracuse, N. Y. for "How to Make Poultry Pay." It is sent without cost.

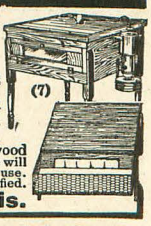
Wisconsin Wins In Big Hatching Contests EVERY YEAR

130 Egg Incubator
130 Chick Brooder
BOTH For $10 Freight Paid East of Rockies
180 Egg Incubator and Brooder $12

Wisconsin Incubators won in 1910, 1911, 1912, 1913 and 1914 in National Hatching Contests—Thousand of machines competing. Catalog tells all about it—and why Wisconsins are winners. If ordered together—

BOTH MACHINES $10—Freight Paid East of Rockies

Wisconsins have hot water heat, double walls, dead air space between, double glass doors, copper tanks and boilers, self-regulating. Nursery under tray. Incubator and Brooder shipped complete with thermometers, lamps, egg-testers, all set-up, ready to use when you get them. Incubators finished in natural color showing high-grade Calif. Redwood lumber we use—not painted to cover up cheap material. Send for catalog and we will send you a sample of the material, then you can compare it with the kind others use. If you will do this we know you will order a Wisconsin. Money back if not satisfied.



Wisconsin Incubator Co., Box 88 Racine, Wis.

pound lighter in cock, cockerel, hen and pullet. The Cochins are all of the same weight, viz.: cock, 11 pounds; cockerel, 9 pounds; hen, 9½ pounds; pullet, 7 pounds. The Langshans are the lightest in weight of the entire class, being, cock, 9½ pounds; cockerel, 8 pounds; hen, 7½ pounds; pullet, 6½ pounds.

The Brahmas lay the largest and brownest eggs, the Cochins the smallest, and the Langshans the most beautiful tints of color of shell.

The first birds imported from Asiatic countries were tall, loose-jointed and awkward, and of various colors, ranging from a reddish yellow to a grayish white. They hailed under various titles such as Shanghais, Brahma-Pootras, Chittagongs, etc. From these evolved the Brahmas and the Cochins. Later on Major Croad, of the British Army, secured some black fowls which he sent to England from Northern China, which he named Langshan, after the province from which he secured them.

The exact origin of the Brahma fowl is not fully determined upon by English authorities. Harrison Weir dates the origin back to the pen of Gray Shanghais George P. Burnham, of Massachusetts, sent in 1852 to Her Late Majesty Queen Victoria.

In his book "The Hen Fever," published in 1855, Mr. Burnham said: "An ambitious sea captain arrived at New York from Shanghai, bringing with him about 100 China fowls of all colors, grades and proportions. Out of this lot I selected a few gray birds that were large and consequently very fine."

Then followed the Chamberlain Brahma, but just how it originated, it seems has never been recorded. The Shanghais had single combs, but the Chamberlain Brahma had a well established pea comb.

I. K. Felch says the Light Brahma was introduced to public notice in 1851-53.

The story of the original strain of Light Brahmas begins at Hartford, Connecticut, where Mr. Chamberlain having purchased from an East Indian ship captain some fowls from which he started the strain that formed the foundation of the Brahma family we have today. While the Brahma is an Asiatic, the strain we have in this country is purely American, being so different in shape and style and other characteristics from the strain bred in England, that it seems almost like another breed.

That is now known as the Cochin was formerly the Shanghai fowl. The Cochin is probably the oldest distinct race of fowls. As a breed they were kept in China in 1840, and probably the first importation was made to this country seven years later. Like with the Light Brahmas, there is a difference in type between the English and the American Cochins. Both have the same general origin, but they are entirely different in form and style.

McGrew says the original of all Cochins, as they came from China, were in color pale or lemon buff, dark red or cinnamon buff, and brown or partridge. Whites and blacks came later.

It is conceded that the Malay or the Games of the black-red type were responsible to some extent for the foundation color of the Partridge Cochin, and the present day finish of beautiful shades is the result of the continued care and judgment used by fanciers. Here again there is a difference between the English and the American strains. The English Standard calls for the top color of the male to be an orange or golden red, while the American Standard wants a bright red or a dark orange-red. Again on the part of the females, the English want a light brown penciled with a darker shade, while the Americans call for a rich mahogany-red penciled with brown or black.

Thus it will be seen, in the history of the Brahmas, and the Cochins, and, to a certain extent the Langshans as well, the breeds that are supposed to compose the one have had more or less influence in the composition of the other.

It was claimed in England that the Langshans were nothing more than Shanghais, but Harrison Weir says that from the first time he saw the Langshans he has undeviatingly maintained that they were distinct in make, shape, quality, color, habit and flesh. The Langshan was utilized in crossing, and, it is hinted that it was used by the Black Cochin breeders to improve their stock in point of color.

The breed was imported into England in 1872, by Major Croad. It became popular, especially for two reasons, (1) it was a better layer than any of the Asiatics, and (2) it had a flesh unlike any of the others in flavor, it being more of the order of turkey meat.

It seems some of the English authorities would not accept the report that the Langshan was a distinct breed. Both Lewis Wright and W. B. Tegetmeier claimed the breed to be Black Cochin.

One writer, however, who had a long residence in China, says the Langshan is a distinct breed peculiar to the district from which it takes its name, the Langshan crossing the River Yangtse, some hundred miles from Shanghai.

FOR SALE

150 Choice Ferris Strain S. C. White Leghorn Cockerals at $1.00 each.

MRS. WM. RYAN, Pekin, N. D.

BRED TO LAY

And prize-winning strain. Barred Plymouth Rocks, White Orpington Indian Runner Ducks; Silver Spangled Hamburgs; Single Comb White and Brown Leghorns. Stock and Eggs at Reduced prices.

F. C. MITCHELL CROOKSTON, MINN.

POULTRY FOR SALE

White Wyandottes, Single Comb White Leghorns, Rose Comb Reds, hens 75 cts., pullets 85 cts., each. Fawn and White Indian Runner Ducks or Drakes, $1.25 each. Mammoth Bronze Turkey Toms, $4.00 each. **Joseph Berg, R. 2, Box 12, Hendrum, Minn.**



FOR SALE. Rose Comb Rhode Island Red Cockerels at $1.50.

MRS. HEIDLEBAUGH

Pleasant Lake : : : North Dakota

White Holland Turkeys, Toulouse Geese and Barred Rock Cockerels.

Gustav Larson : : : Northwood, N. D.

White and Columbian Wyandottes, Light Brahmas, and S. C. White Leghorns

Over 30 years a breeder. Stock and eggs for sale. **Michael K. Boyer, Box 27, Hammonton, New Jersey.**

White Rock and Columbia Wyandottes and Buff Orpingtons. Stock and Hatching Eggs in Season. **O. A. Barton, Valley City, N. D.**

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School and Home

Miss Ura Leader,
Ruraldale, N. D.

My dear Miss Leader:

We have for study in the month of February one of the most interesting topics outlined in the course of study. Notwithstanding the rise of the automobile and the motor-truck, I believe it has been stated that there were never more horses at work for the people of the United States than at the present time. Everyone loves a good horse and it is extremely important that the man who needs and must buy them should know a good one when he sees it.

It will be a good plan to spend a fair amount of time on the types of horses and the characteristics and origin of the different breeds. This can be made a very interesting study if you can give the class some of the breed history to be found in books like Plumb's "Types and Breeds of Farm Animals." I think it will be well to emphasize the draft horse in your work, since it is **the** important type for the farmer. However, I should not neglect the light horses. The Hackney and French and German Coach horses for carriage use, the American Saddler, and the American Trotter and the English Thorobred can be very profitably discussed. By the way, I have used the word "thorobred" in its proper sense. It is the running horse used in England for racing. If one wishes to speak of a well bred animal he should not use the word "thorobred" but the word "pure-bred." The former can be used correctly only in connection with the English racing horse.

If you followed my advice of last month and sent fifty cents to Secretary B. H. Heide, International Livestock Exposition, Union Stock Yards, Chicago, for a copy of the "Album of International Champions," you have one of the best means of teaching not only the various types and breeds but also the points of a good horse. This book deals not only with horses but with all classes of livestock shown at the International.

As I said before, I should concentrate on the draft horse, and upon the four main breeds of draft horses; namely, the Percheron, Clydesdale, Belgian, and Shire. Be sure to get all the pictures you can find and study them. They will do more toward giving the pupils a correct notion of the different breeds than any amount of talking. Plumbs "Types and Breeds" published by Ginn & Co., is especially good in description and in illustration of all breeds of farm animals. Get it if you possibly can.

Altho the study of types and breeds is an important part of the work, I think that the most time and effort should be put on a very careful study of the "points" of a good horse. It would be almost useless for me to try to give them to you in my short letter, but you can get them in very available form with plenty of illustrations and descriptions in Craig's "Judging Livestock" published by The Kenyon Printing Co., Des Moines, Ia. This study, to be of the greatest value should be accompanied by trips to nearby farms to see and examine horses always comparing them with the pictures of the best animals, and picking out their faults and good points. Another book well suited to your needs is Plumb's "Beginnings in Animal Husbandry." The books which I have mentioned are useful in all your animal husbandry work, and you should have at least two or three of them.

Let me warn you against believing all the stories told of the intelligence of the horse. I have read, particularly in an old children's animal book some of the most improbable stories of this nature. And I am sorry to say that we still have in our midst, would-be naturalists who either know very little of the psychology of animals or else knowingly misrepresent the facts in order to interest the child. Such men have been called "nature-fakers."

Now, in the eighth grade class, you will have the opportunity of doing some very interesting laboratory work. The apparatus is very simple, and the work is very important, don't neglect it. It is the germination and testing of farm seeds. In beginning the topic. I should study the germination of the various seeds such as wheat, oats, corn, flax, and beans from a botanical standpoint, making careful drawings of the seedling at the different stages in its growth, and studying the conditions under which germination can take place. There must be these three conditions: a sufficiently high temperature, enough but not too much moisture, and the presence of air. You can test these conditions by pairs of tin cans containing the same kind of soil. In one pair plant seed you know is viable and place one where the temperature is nice and warm, the other in the cold using the same amount of water. Then note when each appears above the ground. Likewise with another pair plant the kernels at the

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same depth, and keep at the same temperature, but water one well and the other not at all. With the third pair water them both but be sure that there are no holes in the bottom of one while the other is well drained. In all the cans but this one, punch holes to allow proper drainage. You see, the presence of too much water in the soil drives out the air and prevents seeds from germinating and most plants from growing.

Another very good device for observing the germination of seeds is a small wooden box with one side of glass. This can easily be made for you by any boy who can use a hammer and saw. Fill this box with dirt and plant large seeds at different depths next the glass. In this way you can observe the germination of the seed and growth of the seedling from day to day. I think that you will find many uses to which this box may be put.

Now to go to the regulation seed test for germination. For testing small seeds, a device of Professor Bolley's is very good. Take a shallow pan, cover the bottom with water, and then place in the pan a flat object which will not float and which is thick enough so that the upper surface is above water. Now lay on this flat object a piece of cloth or blotter large enough to let the ends hang down in the water. This will, of course, draw the water up by capillarity. The seeds may then be placed on the cloth and covered with another large piece. In all your germination work remember that seeds must have heat, moisture and air. Don't let them get dry or too wet.

Probably the most important seed to test for germination is corn. There are many good germinators on the market, but the cheapest, simplest and best is the rag-baby tester. It and others are described in the Iowa Station's Bulletin No. 135. I will give a short description of it here. Tear ordinary sheeting into strips 8 to 10 inches wide and 3 to 5 feet long. Mark these strips down the middle lengthwise with a heavy pencil and crosswise every three inches; Mark these strips down the middle lengthwise with a heavy pencil and mark these spaces with numbers consecutively, each number being given to the ear tested in that space. Moisten the cloth and remove six kernels from the ear number one placing them in the space numbered one. Continue this with other ears until the strip is full or all the ears sampled. Then take a cob and roll up the strip on it, and slip a rubber band on the roll. Place the roll in water to soak for from 2 to 18 hours then remove from the water, cover with a pail to keep the air damp and leave for about five days when the test may be read. You can make the test by following these directions, but I advise you to send for the Iowa bulletin.

Now if I can be of any further service to you call on me. I hope you will enjoy teaching these topics as much as I have enjoyed trying to help you.

Yours sincerely,
MERRITT N. POPE

A FAITHFUL BEAST OF BURDEN

FEBRUARY—SEVENTH YEAR

The Indian ponies and the wild horses found in the West are all the offspring of horses originally brought from the Old World. Remains of a prehistoric horse have been found in the Northeastern and Middle States, in the Southern States, in California and Oregon, and also in the Bad Lands of Nebraska, Wyoming, and South Dakota; but these had all disappeared long before the early discoverers and settlers came to America from the Old World. It is probable that horses were first utilized for war purposes only, and mention of their use by the Israelites and the Egyptians is made in the Bible. The Greeks and the Romans learned the value of horses at an early time, and the stories of their famous chariot races will always live in history. The curb bit we owe to the genius of the Romans and the snaffle bit to the Greeks.

The various breeds of horses have been developed thru the influence of different climates and different kinds of food and thru the influence of careful and continued selection from time to time of individuals showing certain marked characterists and desirable qualities. The improvement of a great many of our breeds is due in a large measure to the influence of the Arabian horses. As early as 1603, Arabian horses were brought to England and crossed with native stock. After 1700 many oriental horses were imported into England, and they exercised a strong influence in improving the breeds. Since then many very important breeds have been developed. They may be classed as follows: draft horses, carriage or coach horses, speed horses, ponies.

Draft horses are those that are specially adapted for drawing heavy loads. They are usually of heavy build and have broad backs, upright shoulders, and short, muscular legs set wide apart. The leading representatives are the Percheron, developed in France; the Clydesdale, which originated on the river Clyde in Scotland; the Shire, a native of England dating back to the Roman conquest; the Suffolk, which came from Suffolk County in the eastern part of England, dating back to 1700; the Belgian draft; and the Boulonnais, a French draft horse somewhat larger and coarser than the Percheron.

All draft horses are large and weigh from fifteen hundred to twenty-five hundred pounds.

Carriage or coach horses are those used for drawing coaches and vehicles of that class. They are stylish in appearance and lighter than draft horses. They should be about sixteen hands high and should weigh from one thousand pounds to fifteen hundred pounds, according to the breed. Coach horses have a lean, graceful head, broad forehead, prominent eye, long arching neck, round full body, long level croup, high carriage of tail, and they must have legs showing cleanness, good bone, and plenty of muscle. The leading breeds are the hackney, with an English ancestry dating back to 1303, or earlier; the French coach, known in France since prehistoric times; the German coach, with an ancestral line dating back five

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centuries in Germany; and the Cleveland bay, whose native home was on the Cleveland hills of York County, England.

Speed horses have long legs, sloping shoulders, and slender bodies. Some of the leading types are the thoroughbred, derived from the union of Arabian, Barb, and Turkish stock with the lighter English stock, from which was developed an animal of great speed, unusual endurance, and fine symmetry of form; the American trotting horse, including such noted families as the Hambletonians, the Mambrinos, the Morgans, and the Clays. The pacers also belong to the list of speed animals, but their ancestry does not differ essentially from that of the trotting horses.

Ponies are horses of small build, some of which are modeled on the small draft type and others on the trotting-horse type. The chief breeds are the Indian ponies of the northern and western part of the United States, the mustang ponies of the South and Southwest, and the Shetland ponies brought to various parts of this country from Scotland and the Shetland Islands. The Shetland ponies are very gentle and serviceable for the use of small children. Their average height ranges from thirty-six to forty-four inches.

The Indian ponies and mustangs are the descendants of small horses brought to this country by the early settlers from Spain and France. They are animals of great endurance, but as a rule they are not very gentle or tractable.

The mule is a hybrid resulting from crossing a jack on a mare, and is not a true breed. It has been known and valued as a beast of burden since the days of the early Romans and Greeks. Mule raising in the United States dates back to 1787, when George Washington was presented with a fine jack by the king of Spain. Mules are valued chiefly as draft animals, but in some parts of the United States they are used for saddle purposes. Missouri, Kentucky, Tennessee, and Texas furnish the most of the mules in use at the present time. For draft purposes they usually command higher prices than horses because of their greater endurance and strength, their resistance to disease, and their great longevity.

INSTITUTE PRIZE ESSAY

In order to encourage the members of the Boys' and Girls' Institute held last month at the Agricultural College, the writer offered a prize of a five-dollar gold piece for the best write-up of the trip, if handed in before January 1.

Miss Lilly Johnson, of Kempton, Grand Forks County, receives the five-dollar piece.

The following sent in essays that deserved something more than "favorable mention," so I am placing their names for two years on the list of the North Dakota Farmer and the Rotary

Hope Stubblefield, Towner County; Ethel Froemke, LaMoure County; Jennie Nelson, Dickey County; Eugene Daily, Walsh County; Ida Meher, Hettinger County.

The following will receive for one year the North Dakota Farmer and the Rotary:

Doris Dubuque, Grand Forks County; Maude Allen, LaMoure County; George Rogers, Hettinger County; Clara Bryn, Ramsey County; Walter Mulholland, Renville County; Melis Watson, Billings County; Vilvian Chalmers, Hettinger County.

Miss Dalha Higgins, Mott, submitted one of the very best, tho her essay did not reach this office until the 12th of January. However, her work was exceptionally fine, and the artistic cover design was so well executed the writer is presenting her with a drawing set, in addition to the subscriptions to the North Dakota Farmer and the Rotary.

Congratulations to every one of the members of the Institute and to all those boys and girls who **made an effort** (that which really counts in this life), tho they may not have been prize winners.

Regardless of the strong temptation to continue all-grain farming may you and your folks D-I-DI-VERSIFY!

W. G. CROCKER (Uncle Will)

A LIVE COUNTRY CLUB

To the North Dakota Farmer:

By request of one of your farmer subscribers I am sending you an article for your paper about our club.



UNIVERSITY OF NORTH DAKOTA
ELLENDALE BRANCH
ELLENDALE, NORTH DAKOTA

Should you like to print it, do so and if convenient send me two or three copies. I take five farm papers, but not the North Dakota Farmer.

Respecfully Yours,

Mrs. G. W. Maynard, Sec.

On February 26, 1914, J. W. McNary of the Better Farming Association, and who is located at Pingree, N. D. came out to the schoolhouse in Lyon Township, called the farmers and their families together for the purpose of organizing a farmers' club. After a short talk on alfalfa and hog cholera he organized the Lyon Township Farmers' Club.

Fred Ferguson was elected president; Martin Homuth, vice-president; R. H. Koves, Treasurer; Mrs. G. W. Maynard, secretary. Miss Marie Woll, Mrs. Fred Ferguson and Mr. Chas. Meyer, social committee and Mrs. H. A. Hammersteadt and Mrs. C. D. Wood, supper committee.

The meetings are held every two weeks on Friday night during winter and on Saturday night during summer. Our club is a live one and the members all hustlers. I do not mean to say we have no knockers in our club and no obstacles come up to be disposed of, but up to the present time everything is working along nicely. People for miles who heard of the good times to be had come to attend the Lyon Club meeting Our school house is too small to accommodate so many and we were forced to get out admittance cards and allow two to each family. They are allowed to bring two guests.

Before this club was organized we hardly knew our nearest neighbor. Our club is a great success socially and it seems as if we are now one great family. We are all acquainted and not only have a good time ourselves, but make it very pleasant for our young people who have no desire to go to town to have a good time. Great praise is due our social committee and the school children for the nice programs rendered every two weeks. Our discussions on gardening, raising wheat, corn and potatoes, were instructive; also the Good Roads topic was brought up and discussed. It would take me too long to tell you all the good things we enjoy at our club and we are pleased to have members from other clubs visit us and I think after listening to one of our programs and partaking of the bounteous supper prepared and served by the supper committee and its helpers you will want to visit us again.

The Lyon Township Farmers' Club Song

(Tune: "Marching Thru Georgia.")

Bring the good old bugle boys,
We'll have another song
Sing it with a spirit
That will start the club along
Every farmer join the ranks
And make our club work strong
Work for the club in the country.

Chorus:

Hurrah! Hurrah! Success will come our way
Hurrah! Hurrah! We'll see a brighter day
If every farmer does his share
We'll happiness convey
To every home in the country.

Everybody long enough
The lonely paths have trod
It is time to organize
The tillers of the sod
Everywhere the meetings are,
And do not think it odd,
Work for the club in the country.

To our neighbors and our friends
About our work we'll tell
We can learn about some things
And how to do them well.
Together we will meet and talk
About our plans we'll tell,
So work for the club in the country.

Then together here we are
The blues away we'll drive
Cheer our friends at all events
Forever we will strive
Lyon township country club
Is very much alive.
Hurrah for the club in the country!

Hurrah! Hurrah! For our Club we'll always cheer
Hurrah! Hurrah! for its members far and near.
Our club's the best in all the west
We'll always loyal be
To Lyon Township Club in the country.

Our club colors are green and white.
Club Pennants: green and white.

Club Yell

Wahoo, Wah-Wahoo Wah,
Lyon Township Club
Ray! Rah! Rah!

What's the matter with the club?
It's all right.
What's all right?
The club.
Rah! Rah! Rah!
Rah! Rah! Rah!
Rah! Rah! Rah!

Household Hints

By Aunt Maggie

A few drops of oil of lavender in book cases will prevent mildew on books.

Vinegar placed in a bottle of dried up glue will moisten and make it liquid again.

To remove rings from a finger swollen by their tightness, dip the finger in ice-cold soap suds.

If you boil hooks and eyes in strong soda water before sewing them on garments, it will prevent their iron rusding in the wash.

Colored cotton goods should be rinsed in water to which vinegar has been added—a tablespoonful to a quart of water.

Hard-boiled eggs should be plunged in cold water as soon as they are removed from the stove. This prevents a dark ring from appearing around the yolk.

To clean the nickel on kitchen stoves which becomes brown from heat, rub them first with a cloth dipped in vinegar.

Old putty can be removed without injury to sash or glass by passing a hot soldering iron over it. The heat of the iron softens it readily and permits its removal with a knife or chisel without much trouble.

If there is occasion to press corded material such as cotton corduroy, etc., put it right side down on a turkish towel. Then the cords will not press flat.

If you have house plants in your windows don't forget to keep turning the pots around and keeping them at least six inches apart, if you would have bushy well rounded plants.

Nothing is more troublesome than trying to keep a cloth on the broom while cleaning the dust off the wall. Use the sleeves and legs of old knit underwear. Put the broom handle in the large part of the sleeve or leg; pull it well up over the broom; no pin is needed to keep it in place. It can't slip off, the more you pull down on the wall the tighter the cloth becomes.

Savings of Women

With the coming of the pay envelope for women, has developed the evolution of the broken nosed tea-pot as a savings bank. Many and varied are the methods women have worked out to save money altho it is only within the last fifty years that the average woman has had to consider the problems individually. With their "going into business," questions of fi-

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nance and investment have come to them.

Many amusing incidents of the broken-nosed teapot as a savings bank have come to light. There is a story of Pedro Alveredo, a millionaire of Mexico, whose mines yielded silver so fast that he could not spend it, tho he bought pianos and ponies by the carload, and all the metal work in the palace that stood where his old adobe hut had once been built, was of silver.

Alvzredo had no faith in banks and kept great quantities of cash in his house. Naturally much of this came into the hands of his wife. She had a special bed quilt which always covered her at night and was not far away from her in the day time. When she died her maid went to Alvaredo and asked for the quilt. Alvaredo was superstitious and disliked to give away anything to which his wife had been so much attached. He offered the maid money instead and, altho his money was no longer coming in at the rate of $30,000 a day, he was very generous with her; but the girl insisted that she would have no memorial of her mistress except the quilt.

Finally Alvaredo's suspicions were thoroly aroused and he ripped the quilt to pieces. It contained $30,000. Among the money was a letter from his wife saying that she had left the money for her two sons and directing that it be put in the bank to their credit. Now the father has lost his wealth, but the two sons are being educated in an American college on the interest of their mother's savings.

Health

So soon as chilblains threaten your peace of mind, get to work immediately to conquer them. Quite simple is a strong bath made of salt water. Place two handfuls of salt in a vessel and just add enough water to cover it. Allow this to stand for two hours to dissolve, then strain and add just enough hot water to cover the ankles. Soak the feet several minutes then gently massage them. Dry carefully. A fresh solution should be made so that the treatment may continue. This remedy has effected a cure numberless times when the chilblains have been unbroken.

With the chilling winds of winter come many aches and pains. Especially does ear-ache bother children. This may be effectively relieved by applying sponges wrung out of hot water over and behind the ear. A few drops of heated oil mixed with laudanum, in severe cases should bring instant relief.

Kitchen Hints

The best poultry has firm flesh, yellow skin and legs.

A spoonful of vinegar added to the water in which meat or fowls are boiled makes them tender.

Good macaroni is of a yellowish tint, does not break readily in cooking and swells to three or four times its bulk.

To prevent juicy pies from running over in the oven, wet a strip of cloth in cold water; lay around the edge firmly and remove when pie is baked.

Half a teaspoonful of sugar will often revive a dying fire.

A dish of hot water set in the oven will keep cakes etc., from burning.

Melted butter will not make good cake.

Seasonable Receipts

Edited by Mrs. Sadie Baird.

Mutton Stew and Dumplings

One and one-half pounds of mutton from shoulder, cut in small pieces; add one onion and one carrot, sliced; cover with boiling water and boil fifteen minutes; reduce the heat and let simmer one and one-half hours. Turn meat from kettle, season. Place potatoes in bottom of kettle, place meat on the potatoes, pour liquid over this, and add enough boiling water to cover all; place dumplings on top of meat, and boil twenty minutes.

Dumplings: Mix two cups of flour, four level teaspoons of baking powder, one-fourth teaspoon salt. Add two tablespoons of lard as for biscuit. Moisten with one cup of water. Shape into six dumplings, and cook with meat and potatoes.

Creamed Dried Beef

One-half cup of dried beef shredded with a knife into small pieces. Soak in cold water about five minutes. Make White Sauce, omitting the salt; add dried beef, bring to the boiling point, and serve with potatoes or on toast.

Breakfast Pie

Remove fat and bone from remnants of roast beef or steak. Use about two cups cut into small pieces; add one small chopped onion, one-fourth teaspoon of salt, speck of pepper; cover with boiling water, and let it simmer about one hour. Then thicken the liquid with two tablespoons of flour, and remove to a baking dish, place biscuit dough on top of the meat, and bake in the oven until the crust is done. The gravy should completely cover the meat, otherwise it will cook dry.

For biscuit dough use one cup of flour, one and one-half teaspoons of baking powder, one-fourth teaspoon of salt, two and one-half tablespoons of lard or butter.

Creamed Potatoes

When creaming potatoes cut them cold boiled: then sprinkle generously with flour and toss about mixing well with the flour. Add the amount of cold milk desired and after seasoning put all on the fire to cook. As it heats, stir gently. It will thicken without lumps and be smooth and creamy. This does away with the task of making thickening and the whole is completed in half the time and with half the work. The same method may be used in creaming anything else.

Corn Chowder

Cook one slice of bacon, or salt pork, cut in small pieces, until crisp or brown. Add slice of onion, cut in small pieces, and fry until brown. Parboil three cups of thinly sliced potatoes for ten minutes, drain, and add the potatoes to the bacon and onion. Add one can of corn, one quart of milk, two tablespoons of butter, one-half teaspoon of salt, and one-eighth teaspoon of pepper. Cook five minutes. Add half a dozen crackers, and serve.

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Zinc takes more oil to the pound than lead, and, because "oil is the life of paint" lead plus zinc makes the best paint known.

Baser metals are sometimes used in paints, but their value is unproved—and unless you are willing to lend your two or three-thousand-dollar house as a subject for experiment—better keep on the safe side and buy Mound City Horse Shoe Brand House Paint, which is made of really precious metals, in right proportions, and rightly ground in pure aged linseed oil.

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Alex Allin
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